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(74) Agents: **WOLDE-MICHAEL, Girma** et al.; MS LC340,
710 Medtronic Parkway, Minneapolis, MN 55432 (US).

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(71) Applicant (*for all designated States except US*):
MEDTRONIC XOMED, INC [US/US]; 6743 Southpoint Drive, North, Jacksonville, FL 32216-0980 (US).

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(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **SLENKER, Dale E.** [US/US]; 5313 Blue Pacific Dr. W., Jacksonville, FL 32257 (US). **LEWIS, Cecil O.** [US/US]; 4170 Tradewinds Drive, Jacksonville, FL 32250 (US). **NORMAN, Gerould W.** [US/US]; P. O. Box 550676, Jacksonville, FL 32255 (US). **PRISCO, John R.** [US/US]; 11910 Swooping Willow Road, Jacksonville, FL 32223 (US).

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(54) Title: SURGICAL SYSTEMS AND METHODS FOR BIOFILM REMOVAL, INCLUDING A SHEATH FOR USE THEREWITH

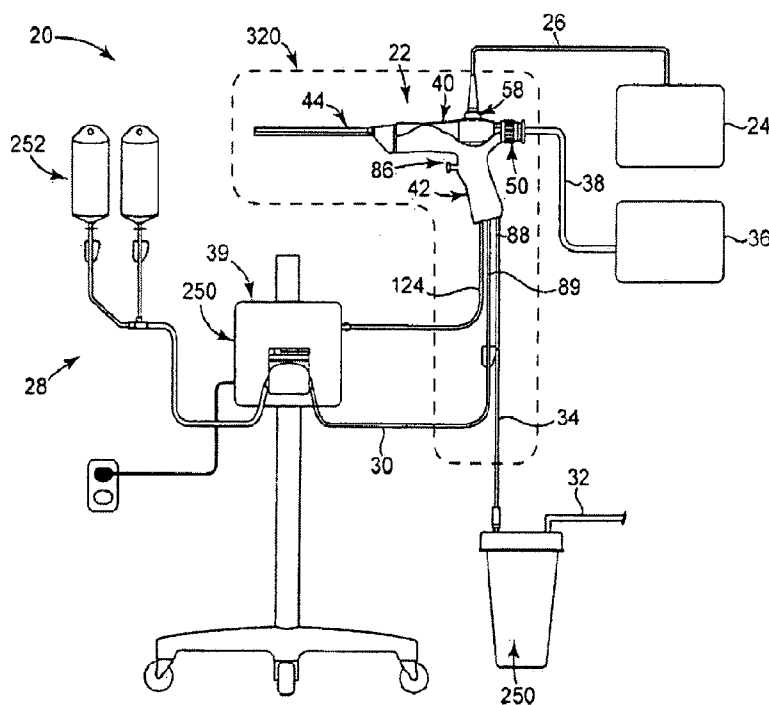


Fig. 1

(57) Abstract: Systems, methods, and apparatuses for one or more of reducing, removing, or preventing growth of bacterial biofilms are provided, including an endoscopic procedure using a surgical instrument adapted to dispense a pressurized flow of irrigant through a nozzle to substantially remove a layer of bacterial biofilm.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A61B A61M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 95/05112 A (VISTA MEDICAL TECH [US]) 23 February 1995 (1995-02-23) figure 1 page 4, lines 10-13 page 5, lines 6-10 page 8, lines 11-36 page 13, lines 5-19	1-10
A	WO 94/22358 A (ENDOMEDICAL TECH INC [US]) 13 October 1994 (1994-10-13) figures 1,5 page 9, lines 12-21 page 10, lines 3-11 page 14, lines 15-19 ----- -/--	1-10

☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:

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O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

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European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Kaden, Malte

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2006/063973 A1 (MAKOWER JOSHUA [US] ET AL) 23 March 2006 (2006-03-23) paragraphs [0009], [0201], [0216] figure 25 -----	1-9
A	US 2005/049459 A1 (HERN SOREN [BY]) 3 March 2005 (2005-03-03) paragraphs [0055], [0061]; figures 1,2 -----	1-9
A	WO 94/05200 A (ADAIR EDWIN LLOYD [US]) 17 March 1994 (1994-03-17) claim 1; figures -----	1,10
A	US 4 998 527 A (MEYER WILLIAM F [US]) 12 March 1991 (1991-03-12) claim 1; figures -----	1,10

INTERNATIONAL SEARCH REPORT

International application No.
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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 11-20
because they relate to subject matter not required to be searched by this Authority, namely:
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by surgery.
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

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